--Description of the Related Art--;

in line 9, cancel ", for example,";

in line 11, cancel "," and substitute --.-- therefor;

in line 12, cancel "connections" and substitute --Connections-- therefor;

5   in line 13, cancel "being capable of being" and substitute --can be-- therefor;

in line 14, cancel "said" and substitute --this-- therefor;

in line 17, cancel "The" and substitute --In this article, the-- therefor;

in line 18, cancel "thereby";

10   in line 19, cancel "means - also referred to as";

in line 20, cancel "or SIM card -" and substitute -- (SIM) card-- therefor;

in lines 21-22, cancel "means - for example,--;

in line 22, cancel "-";

in line 25, cancel "ensues" and substitute --takes place in a-- therefor, and

15   after "related", insert --manner--;

in line 27, after "systems", insert --,--, and cancel ", for example,"; and

in line 29, cancel the first "the" and substitute --a--therefor.

On page 2:

in line 1, cancel "is thereby" and substitute --in these systems is--

20   therefor;

in lines 3-4, cancel "etc., in contrast whereto" and substitute --. By contrast,-- therefor;

in line 11, cancel ", this" and substitute --. This is-- therefor, cancel "being", and cancel "in" and substitute --for-- therefor;

25   in line 12, after "given", insert --a--;

above line 14, insert

--SUMMARY OF THE INVENTION--;

in lines 16-17, cancel "so that" and substitute --enabling--therefor;

in line 17, cancel "derives";

cancel lines 18-21 and substitute the following therefor

--   This object is inventively achieved by a method for encryption of information for a radio transmission and for authentication of subscribers in a communication system that comprises an access network having equipment for the

5   radio transmission, the communication system further comprising at least one core network having a respective authentication equipment for the subscriber authentication, the method comprising the steps of allocating a radio channel for the transmission of the information via a radio interface from/to at least one base station of the access network, mutually transmitting public keys between a mobile

10   station and the base station via the radio interface, encrypting subsequent information to be transmitted via the radio interface using one of the public keys received by the base station or the mobile station, deciphering encrypted information received by the mobile station or the base station on the basis of a private key that is allocated to the transmitted, public key in the mobile station or

15   in the base station, and authenticating the core network via a subscriber identity mobile card of the mobile station, and authenticating the subscribers via the authentication equipment of the core network on the basis of encrypted information that have been mutually sent.

This object is also achieved by a communication system for encryption of

20   information for a radio transmission and for authentication of, comprising an access network having equipment for the radio transmission as well as at least one core network, the core network having a respective authentication equipment for the subscriber authentication, the communication system utilizing a radio channel for transmission of the information via a radio interface from/to at least one base

25   station of the access network, memory devices in a mobile station and in the base station for storing public keys and private keys that are allocated to the public keys, transmitters in the mobile station and in the base station for mutually sending the public keys via the radio interface, controllers in the mobile station and in the base station for encryption of the information to be subsequently sent via the radio

30   interface upon employment of the public keys received by the base station or,

respectively, the mobile station and for deciphering the received, encrypted information on the basis of the stored, appertaining private key the mobile station comprising a subscriber identity mobile card for authenticating the core network, the core network comprising an authentication equipment for authenticating the

5   subscribers; and the authenticating the core network and the authenticating the subscribers utilizing mutually transmitted, encrypted information.--

in lines 27-28, cancel ", respectively," and substitute --the-- therefor;

in line 30, cancel ", respectively," and substitute --the-- therefor; and

in line 32, cancel ", respectively,".

10   **On page 3:**

in line 2, cancel "means" and substitute --component/equipment-- therefor;

in line 3, cancel "the means" and substitute --a component/equipment-- therefor;

15   in line 7, cancel "ensue" and substitute --take place in a-- therefor;

in line 8, after both instances of "related", insert --manner--, and after "of", insert --a--;

in line 12, cancel the first "-" and substitute --(-- therefor, and cancel the second "-" and substitute --)-- therefor;

20   in line 13, cancel "," and substitute --(-- therefor, and after "authentication", insert --)--;

in line 16, cancel "this having not been" and substitute --which was not-- therefor;

in line 27, cancel "means" and substitute --device-- therefor; and

25   in line 30, cancel "means" and substitute --device-- therefor.

On page 4:

in lines 2-3, cancel ", that latter using this" and substitute --which uses this key-- therefor;

in line 22, cancel "means of the";

in line 25, cancel "ensues" and substitute --occurs-- therefor;

in lines 25-26, cancel ", this being capable of being" and substitute --which can be-- therefor;

5 in line 26, after "implemented", insert --,--, and cancel "given" and substitute --for-- therefor;

in line 28, cancel "means of the";l

in line 30, cancel "means from the"; and

in line 31, cancel "the means of" therefor.

10 **On page 5:**

in line 2, cancel "network means" and substitute --core network-- therefor;

in line 3, cancel "network means" and substitute --core network-- therefor;

15 in line 6, cancel "means";

in line 9, cancel "see to" and substitute --implement-- therefor;

in line 13, cancel ", respectively,";

in line 16, cancel "means" and substitute --authentication mechanism-- therefor;

20 in line 17, cancel "control means" and substitute --controller-- therefor;

above line 20, insert

a^4

--BRIEF DESCRIPTION OF THE DRAWINGS --;

cancel line 22;

in line 23, cancel "the" and substitute --is a-- therefor;

25 in line 26, cancel "the message" and substitute --is a message--, and after "flow", insert --diagram--;

in line 29, cancel "the message" and substitute --is a message--, and after "flow", insert --diagram--; and

in lines 30-31, cancel "a network means of".

On page 6:

above line 1, insert

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--;

in line 1, after "a", insert --universal network--;

5   in line 2, cancel ", for example,";

in line 6, cancel ", for example,";

in line 7, cancel "thereto - is thereby" and substitute --to it - is-- therefor;

in line 11, cancel ", for example,";

in line 16, cancel "means" and substitute --authentication equipment--

10   therefor; and

in line 28, cancel "thereby".

On page 7:

in line 3, after "have", insert --a--;

in line 4, cancel "means";

15   in line 5, cancel "transmission and reception means" and substitute --

transmitter and receiver-- therefor;

in lines 6-7, cancel "transmission and reception means" and substitute --

transmitter and receiver-- therefor;

in line 7, cancel the first "means", and cancel "transmission and reception

20   means" and substitute --transmitter and receiver-- therefor;

in lines 8-9, cancel "control means" and substitute --controller-- therefor;

in line 9, cancel the "means" after "memory";

in lines 9-10, cancel "transmission and reception means" and substitute --

transmitter and receiver-- therefor;

25   in lines 11-12, cancel "- station-related via the transmission and reception

means MSE -";

in line 15, cancel the first "means" and cancel "control means" and substitute --controller-- therefor;

in line 19, cancel "means" and substitute --entity-- therefor, and after "i.e.", insert --,--;

in line 20, cancel "It" and substitute --The base station-- therefor;

in line 23, cancel the first "means", and cancel "control means" and substitute --controller-- therefor;

in line 25, cancel "these begin" and substitute --which are-- therefor;

cancel line 27 and substitute --station BS or its controller BST-- therefor;

in line 30, cancel "-" and substitute --,-- therefor; and

in line 31, cancel "-".

On page 8:

in line 4, cancel "[ ]" and substitute --method-- therefor, and cancel "thereby" and substitute --thus-- therefor;

in line 5, cancel "of" and substitute --in-- therefor;

in line 9, cancel "transmission and reception means" and substitute --transmitter and receiver-- therefor;

in line 10, cancel ", said first public key PUK1-BS having" and substitute --which has-- therefor;

in line 11, cancel "being" and cancel "control means" and substitute --controller-- therefor;

in line 12, cancel "means";

in line 13, cancel "following", and after "information", insert --that follows it--;

in line 19, cancel "listen to this" and substitute --eavesdrop-- therefor;

in line 22, cancel "means" and substitute -- subscriber identity mobile card-- therefor, and after "authentication", insert --,--;

in lines 22-23, cancel "controller means";

in line 25, cancel "means" and substitute --authentication equipment--

therefor;

in line 30, cancel "means" and substitute --entity-- therefor; and

in line 31, cancel "means" and substitute --entity-- therefor, and cancel "as".

On page 9:

in line 3, cancel "comprised thereof";

in line 5, before "signed", insert --and--;

in line 8, cancel "-" and substitute --,--;

in line 9, cancel "-";

in line 14, cancel "Further" and substitute --Furthermore-- therefor, and before "access", insert --the--;

in line 15, before "core", insert --the--;

in line 16, cancel "wherein" and substitute --in which-- therefor;

in line 20, cancel "The example" and substitute --This example-- therefor; and

in line 21, cancel "thereby limited thereto" and substitute --limited in-- therefor.

On page 10:

in line 10, before "third", insert --and--;

in line 11, cancel "not being" and substitute --are not-- therefor, and cancel "into";

in line 14, cancel "thereby";

in line 17, cancel "being" and substitute --and are-- therefor;

in line 18, cancel "thereof" and substitute --of it-- therefor;

in lines 20-21, cancel "-specific means" and substitute --identity mobile card-- therefor;

in lines 21-22, cancel "- on the basis of the subscriber-related SIM card-";

in line 22, cancel "means" and substitute --authentication equipment--

therefor;

in line 24, cancel "thereby ensues" and substitute --takes place in--, and after "encrypted", insert --format--;

in line 25, cancel "means" and substitute --authentication equipment--

5   therefor;

in line 29, cancel "means" and substitute --authentication equipment--

therefor;

in line 31, cancel "thereto"; and

in line 32, cancel "means" and substitute --authentication equipment--

10 therefor.

On page 11:

in line 1, cancel ", said means" and substitute --. The authentication

equipment-- therefor, and cancel "implementing" and substitute --implements--

therefor;

15 in line 2, cancel "- likewise" and substitute --in a likewise manner--

therefor;

in line 6, cancel "ensues" and substitute --takes place-- therefor;

in line 7, cancel "-specific means (SIN)" and substitute --identity mobile

card (SIM)--;

20 in line 8, cancel "network means" and substitute --authentication

equipment-- therefor;

in line 10, cancel "-" and substitute --,-- therefor;

in line 13, after "achieved", insert --.--;

in line 14, cancel "and access", and substitute --The access-- therefor,

25 cancel the first "-" and substitute --(-- therefor, and cancel "- and" and substitute --

) and the-- therefor;

in line 15, cancel the first "-" and substitute --(-- therefor, and cancel "the

second "-" and substitute --)-- therefor; and